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ABSTRACT

This report presents the results of an effort to develop a series of program alternatives for consideration by the National Institute of Education (NIE) that correspond to selected program goals developed and presented in an earlier report. The program alternatives draw heavily on the following conclusions that have emerged from ongoing future-oriented work of the Educational Policy Research Center: (1) continually deepening and accelerating changes in society may be expected. Approaches are needed that will both decentralize the conduct of educational R&D to the extent feasible and educate for flexibility, a high degree of tolerance of differences, and the ability to cope with varied cultural norms; (2) the anticipation of "adaptive" problems that have not yet become acute is a necessary part of R&D planning, given the long lead-time required before R&D products become mature; (3) many of the most critical problems of education and society are systemic in nature, hence may well be intractable by conventional piecemeal or centralized "top-down" approaches involving only one sector of society; and (4) coordinated public-private and multiagency approaches are therefore likely to be increasingly necessary. The report focuses on the development of research programs in the societal context of education; increasing the effectiveness of the educational R&D system; multiorganizational coordination; and anticipatory identification of education-related problems. (Author)

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SRI Project 6747

EXECUTIVE OVERVIEW

This report presents the results of a five-week effort to develop a series of program alternatives for consideration by NIE that correspond to selected program goals developed and presented in an earlier report.*

The program alternatives were developed to complement rather than duplicate other NIE planning efforts, and draw heavily on the following conclusions that have emerged from on-going future-oriented work of the EPRC: (1) continually deepening and accelerating changes in society may be expected, and approaches are needed which will (a) decentralize the conduct of educational R&D to the extent feasible, in order to foster the development of a more competent problem-solving infrastructure throughout society , and (b) educate for flexibility, a high degree of tolerance of differences, and the ability to cope with varied cultural norms; (2) the anticipation of "adaptive" problems which have not yet become acute is a necessary part of R&D planning, given the long rise-time required before R&D products become mature; (3) many of the most critical problems of education and society are systemic in nature, hence may well be intractable by conventional piecemeal or centralized "top-down" approaches involving only one sector of society; and (4) coordinated public-private and multi-agency approaches are therefore likely to be increasingly necessary.

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* "A Needs Assessment for Educational R&D," by the present authors.

As requested, we focused our present efforts on the development of research programs in four areas of concern: (1) the societal context of education; (2) increasing the effectiveness of the educational R&D system; (3) multi-organizational coordination; and (4) anticipatory identification of education-related problems.

The first three areas of concern are each developed in a separate section of the report. Anticipatory identification of education-related problems, however, is treated in the section on Societal Context Research, where both examples of past research and suggested topics for future research are provided.

A short description of each of the program alternatives is presented in the introduction.

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I INTRODUCTION

Scope of Work

The NIE Planning Unit invited the SRI/EPRC and several other policy research organizations to assist with the development of program initiatives that NIE might support. Each group was told not to seek comprehensiveness, but rather to translate the most important insights that resulted from their work to date into a form that would be most useful to the NIE Planning Unit. The analytical approach to be used was set forth in a memorandum "Specifications for NIE Planning Contracts," in which four task elements were defined: (1) the development of an ordered goal structure, identifying target groups affected by the achievement of these goals; (2) a description of the state-of-the-art relating to manipulable variables through which these goals might be achieved; (3) the specification of program alternatives for NIE that are responsive to conclusions reached in the first and second task elements; and (4) the development of a funding strategy and support priorities to help guide the selection of program initiatives.

Our first submission to the Planning Unit, "A Needs Assessment for Educational R&D," responded to the requirements of the first of these tasks. The present paper is responsive to the remaining tasks. Its central objective is to develop a structured set of program alternatives that: (1) are based to a great extent on the conclusions we have drawn from our on-going future-oriented program of educational policy research; (2) respond to the specific requests made by the Planning Unit as a result of our earlier submission; and (3) fill in gaps not covered by other NIE planning documents.* We have tried, insofar as possible, to compliment--rather than duplicate--the results of others' efforts.

As requested, we have focused our present efforts on the development of research program alternatives in four areas of concern: (1) the

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*The primary documents that were used toward this end are: R. Levien, National Institute of Education: Preliminary Plan for the Proposed Institute;" "Program Planning Notes from the Interim Report of the NIE Planning Unit;" NIE Planning Unit, "Report on Organization and Management: An Interim Organization;" J. Howell, P. Wilson, and B. Sprunger, "NIE--Coordination with Other Federal Agencies;" and J. Wirt, A. Lieberman, and L. Spencer, "Organizing for Innovation: Alternative Designs for the American Educational R&D System."

societal context of education; (2) increasing the effectiveness of the educational R&D system; (3) multi-organizational coordination; and (4) anticipatory identification of education-related problems. For reasons of clarity in exposition, we chose to combine the first and the fourth areas. Hence both methods and exemplary results of research to anticipate critical future problems are presented as part of the research programs on the societal context of education.

Conclusions Based on Holistic Analyses of Society

Although both the assigned mission and most of the past work of the SRI/EPRC were largely concerned with the future, alternative futures can be seen in perspective only if the past and present are considered as well. Several of the following conclusions stem from this expanded perspective. They are unprovable by conventional scientific procedures, but are nevertheless useful premises for anticipatory planning.

- Many of the education-related problems facing our society are systemic in nature--they have determinant roots in non-educational sectors of society, and "single-sector" attempts at resolutions are not successful (e.g., education of the disadvantaged and "career education").

- The society is undergoing an increasingly accelerated rate of change and is becoming increasingly "close-coupled" (where a change in one sector quickly and strongly impacts on other sectors, often in unanticipated ways). Thus, adaptive problems are of increasing concern.

- Viewed in a macro-historical sense, the present era (dating from the industrial revolution until, perhaps, the early part of the 21st century) must be viewed as a unique era. It is a period in which man is living off a legacy of virtually non-replenishable minerals and fossil fuels. It was preceded by millenia during which man's consumption from the ecological reservior was small and his impact on the non-human environment minor. It must be followed by a period of indefinite duration in which human activity fits into some new set of ecological relationships, partially of man's devising, but likely antithetical to many of the basic values on which Western institutions are based.

- The rate of change will thus continue, but will likely extend to changing the values and basic premises of the culture.

- The needed changes cannot come from, and are unlikely to be controlled by, top-down management unless authoritarian methods are resorted to.

- Given the uncertainties of the future, we need to cherish the different standards and life styles of sub-cultures--they may be needed as models.

- Thus, education that is to be responsive to the predominant characteristics of the likely future must emphasize the development of a high degree of tolerance, flexibility, and an ability to cope with varied cultural norms. This implies an emphasis on the ability to gain new skills over the attainment of any particular skill; on having access to knowledge and skills to integrate new knowledge over having memorized any particular knowledge; on the development of self reliance over dependence on experts.

- Thus, also, educational R&D should be as decentralized as is feasible, to contribute to the development of a competent problem-solving infrastructure in society.

Program Alternatives for NIE

The research program alternatives noted below and developed in the remainder of the paper are meant to be responsive to the premises listed above, although their desirability is not solely dependent on the validity of these premises.

Societal Context Research

(1) Holistic Analysis of Society: inquiry into the broad alternative prospects that are plausible for society, and identification of broad strategies that seem desirable.

(2) Trend and Event Analysis: in-depth inquiry into key trends and events having particular relevance to the planning of anticipatory R&D, and to issues of public interest.

(3) Anticipatory Needs Assessment: articulation of education-related needs that are responsive to plausible future conditions in society.

(4) Policy Implications: assessment of present or proposed policies in terms of plausible societal consequences.

(5) Integration/ Translation: repackaging results from the above studies for improved dissemination and utilization.

(6) Dissemination: active dissemination to targeted audiences.

(7) Support of Unsolicited Proposals.

Four NIE management alternatives are posed as options with which to structure programs of research on the societal context of education.

Increasing the Effectiveness of the Educational R&D System

(1) A Decentralized Market Mechanism: a series of program elements to foster the emergence of competitive offerings by both public and private sectors which state and local educational agencies can "purchase" as educational R&D services (as distinguished from products).

(2) Programs to Increase Local Incentives to Innovate: a series of programs that would seek to increase the awareness of the need for educational renewal, and the skills to initiate such activity.

(a) Change-Agent Training: special training programs--either in anticipation of, or simultaneous with formal programs of educational renewal--especially targeted for school principals and selected teachers. Such training might also become part of university-based teacher training curricula.

(b) Social Marketing Approaches:Federal exploration of social marketing as a means to increase the effectiveness of dissemination and to increase the status of innovative teaching in "problem schools."

(c) Voluntary Sector Approaches: Research to promote the state-of-the-art of voluntary organizational participation in the policy process in education, especially at the local level.

Research on Multi-Organizational Coordination

(1) State-of-the-Art Assessment and Analysis: a one-shot study to summarize and interpret the literature and personal knowledge of persons with relevant multi-organizational experience.

(2) A Research Advisory Committee on Multi-organizational Coordination: a standing panel of experts on the state-of-the-art of multi-organizational research and operations (between Federal agencies, between Federal, state, and local levels of government, and between the public and private sectors).

(3) A Research , Development, and Training Center for Multi-Organizational Concerns: institutional support for a university-associated but independent Center to conduct conclusion-oriented and decision-oriented research on problems of multi-organizational coordination, and to manage training fellowship and field internship programs.

II RESEARCH ON THE SOCIETAL CONTEXT OF EDUCATION

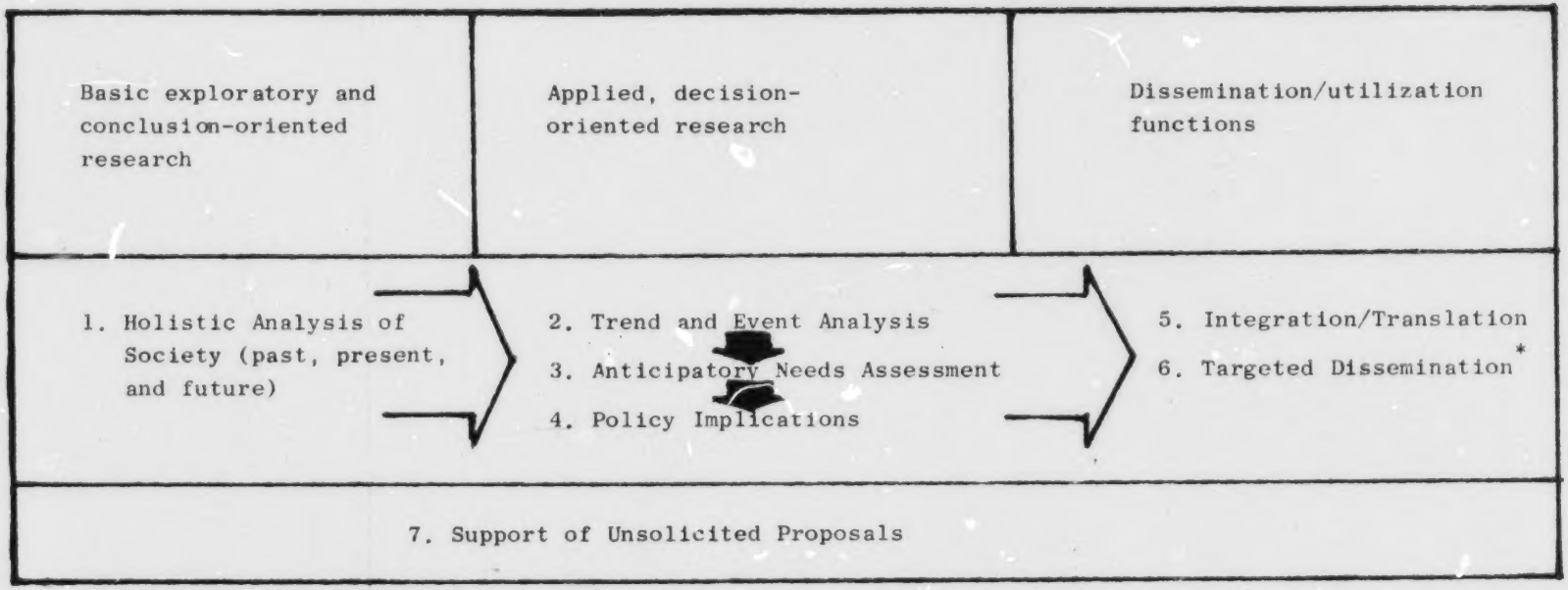
If education is to adequately serve the needs of the larger society, the broader societal context must be considered in educational planning and policy analysis. Two fundamental questions underlie this type of inquiry: (1) what are the characteristics of the evolving society in which education must exist? and (2) how can education be employed to prepare citizens for the evolving future? Such a future-oriented perspective is essential to NIE if it is to anticipate problems that have not yet become acute, and hence be able to mount R&D efforts that will produce the needed results before crisis-oriented programs become necessary.

Although research oriented to the answering of the above two questions has begun, it is supported at a relatively low level; it suffers from an immature state-of-the-art; it is primarily directed toward the analysis of immediate rather than anticipated concerns; and its conclusions are not adequately incorporated into the policy-making process.

The experience of the two Educational Policy Research Centers supported by USOE indicates that it is useful to partition the different types of societal context research into conclusion-oriented, decision-oriented, and translation/dissemination efforts. The broader conclusion-oriented research produces information useful in the conduct of more applied studies, but is not generally responsive to the operating needs of agency people except insofar as it suggests future issues that are likely to become troublesome, hence targets for immediate research. Even the results of more applied, decision-oriented policy research, although relevant to policy makers, are not typically utilized unless either (1) the producers of such research participate in intramural staff studies; or (2) the products of such research are translated and disseminated intramurally where they can be used.

The partitioning of efforts shown by Figure 1 reflects these conclusions. The program elements listed are:

(1) Holistic Analysis of Society--using the term holistic in both a disciplinary and a temporal sense, research conducted in this area would inquire into the broad alternative prospects that are plausible for society, their relationship to the past and the present, and the broad strategies which might feasibly obtain a "desirable" future for society.


Basic exploratory and conclusion-oriented research
Applied, decision-oriented research
Dissemination/utilization functions
1. Holistic Analysis of Society (past, present, and future)
2. Trend and Event Analysis
3. Anticipatory Needs Assessment
4. Policy Implications
5. Integration/Translation
6. Targeted Dissemination*
7. Support of Unsolicited Proposals

* Conventional dissemination is assumed for elements 1-4 and 7.

Figure 1

PROGRAM ELEMENTS FOR SOCIETAL CONTEXT RESEARCH

(2) Trend and Event Analysis--based on the more holistic studies, this type of analysis would identify and explore in depth key trends and anticipated events in society that have particular relevance to the planning of anticipatory R&D, and to issues of public concern.

(3) Anticipatory Needs Assessment--such assessments would derive and articulate education-related needs that are responsive to key societal trends and events.

(4) Policy Implications--assessments of the plausible consequences of following present or proposed policies; be developed in terms of anticipated societal problems, needs, pressures, and changes.

(5) Integration/Translation--the results of the conclusions from the above types of research would be repackaged into forms that could be most effectively utilized by different target groups (both personnel involved in the planning of education-related programs and various public audiences).

(6) Targeted Dissemination--the repackaged conclusions would be actively disseminated as part of other on-going dissemination programs sponsored by NIE.

(7) Support of Unsolicited Proposals--NIE's support program for unsolicited research would include research on the societal context of education.

Each of these program elements is described below, with illustrative examples of results and needed areas of research listed for problem elements 1 -- 4.

Description of Program Elements

Holistic Analysis of Society

Efforts in this area would focus on investigating the present condition of society and its likely (plausible)futures, seeking to gain increased understanding of the broad forces, trends, and events that are shaping the course of society. Attention would be given to the identification of particular trends and likely events that have obvious implications for education, but which are not yet generally recognized or considered within the educational community. Of especial importance is the consideration of future trend-breaking that would lead to radical transformations of the education system.

Given the relatively long rise time that is required before a "critical mass" can be established for this type of study, it should be

given long term institutional support.

Techniques

A variety of methodologies have been developed to gain a holistic understanding of the dynamic state of society. The more piece-meal methods have been described in Erich Jantsch's Technological Forecasting in Perspective, including: contextual mapping, historical analogy, structural constraint analysis, and consensus of expert opinion (including such methods as the Delphi Technique). The more comprehensive methods are of greater relevance to this research area and include: scenario writing to synopsis (as at the Hudson Institute), computer-based system dynamics simulations (as at MIT) and the morphological "Field Anomaly Relaxation Method" (as at the SRI/EPRC).

Although opinions differ on this topic, it is likely that NIE's concerns in this area would be best served by not devoting a high level of funding to the development of highly sophisticated methodologies in this area, but instead by supporting highly competent critical analysis and integration of knowledge as it becomes available.

Examples of Results

Examples of the kinds of conclusions that stem from this type of research are provided in detail in such works as Herman Kahn and Anthony Weiner's The Year 2000, and in the SRI/EPRC Research Memorandum "Alternative Futures and Educational Policy." Examples of likely future trend-breaking or other radical changes in society include: (1) enforced social policies severely limiting continued growth in the consumption of non-renewable physical resources; and (2) a radical modification of the economic system, with attendent changes in the distribution of resources among people and in the conception of "work" (and therefore in the conception of "welfare" as well).

Topics for Future Research

Suggested topics for research based on present results of holistic societal analysis include:

(1) Ways that schooling might better utilize the educational resources of the society.

(2) International education. The increase of communications, transportation, ecological concerns (use of resources), etc., all combine to make the world "smaller" and more interdependent. ER&D should take into account concerns of international education, and should develop mechanisms to facilitate the use of international resources for education and the development of education to cope with international situations.

(3) Societal problem-solving by the voluntary sector. Many of the problems of our society could be more easily or efficiently dealt with by voluntary action on the part of portions of the populace. ER&D should develop mechanisms for enabling voluntary-sector efforts to be useful, as well as developing curricula and instructional processes to equip students to engage in voluntary efforts to resolve the problems of society.

(4) Conflicting paradigms and basic premises about the nature of man. The emergence of effective psycho-technologies has brought into question some basic issues about the socialization of man. ER&D should monitor and seek to synthesize the conflict between paradigms, and assess implications for education.

Developed Sources of Expertise

The capability to conduct this type of research exists within the two Educational Policy Research Centers sponsored by USOE, as well as within other institutions such as the Rand Corporation, the Hudson Institute and the Center for Integrative Studies at SUNY/Binghampton. A need exists for the development of similar expertise at centers that explicitly adopt the perspective of minority groups in the U.S.

Trend and Event Analysis

This research activity would focus on various trends, anticipated events, and their interrelationships which are relevant, either directly or indirectly, to educational concerns. The primary orientation would be the identification of key issues to consider in educational R&D policy (as in the needs assessment discussed below); secondarily, such analysis would shape the more holistic studies discussed above. Thus it is desirable to have at least a part of this kind of research conducted by the same centers that perform the holistic studies of society. As at least one of the available techniques for trend and event identification (the

Delphi) does not depend on the pre-existence of the kinds of expertise that the previous program element develops, an option is to contract out this program element by itself, independently of the other closely connected research elements (1, 3, and 4).

Techniques

The art of trend and event identification and analysis is considerably older than of the more holistic approaches. Available techniques (also described by Jantsch) include trend extrapolation, both numerical and phenomonological; cyclic analysis; trend correlation; and the Delphi Technique.

In spite of earlier beginnings of this kind of research, the state-of-the-art is in particular need of improvement--expecially the techniques of developing and using social indicators to provide a better empirical basis or which to evaluate societal trends. For this reason, consideration should be given to NIE support of both development-oriented and operations-oriented research in this area.

Examples of Results

A variety of plausible trends and anticipated events have been identified by both of the USOE supported EPRCs. (The stress on the term "plausible" highlights the lack of available empirical data to "know" just how valid our perceptions of such trends are.) The following trends are excerpted from papers by Michael Marien of the SURC/EPRC and Willis Harman of the SRI/EPRC* and from related work:

- Highly certain:
  - -- Financial squeeze on schools
  - -- Increasing fraction of educational costs obtained and distributed on a national basis
  - -- Increasing teacher unionization
  - -- Expanding fraction of the populace involved in education
  - -- Increasing involvement of education with other social institutions, and functional relationships to them.
  - -- Increasing importance of knowledge, information overload, and extension of the "have/have not gap" to "knowledge-elites and knowledge-deprived."

* "Alternative Futures in American Education," Appendix 3 to Hearings on H.R. 3606 and Related Bills to Create a National Institute of Education Before the Select Subcommittee on Education, January 1972.

- Less certain:
  - -- Increasing discontent of education's constituencies
  - -- Disfavor of compensatory "treatment" approaches to the disadvantaged
  - -- Transition from "closed" learning systems (teacher-oriented, tradition-oriented, fixed curriculum, age grading of learning, and so forth) to "open" learning systems (student-oriented, change-oriented, flexible curriculum, mastery grading of learning, and so forth)
  - -- Extension of education to industry, community, and home.
- Uncertain, but plausible:
  - -- Erosion of the monopolistic system of public education through mechanisms such as educational vouchers
  - -- Development of international centers of higher education
  - -- Particular aspects of various alternative futures, such as a high level of violence in the schools; insufficient cultural continuity and cohesiveness as a result of an overemphasis on pluralism and change; a high degree of welfare and highly centralized bureaucratization; and a pervasive shift in basic societal and cultural values affecting national goals and institutional functioning.

Topics for Future Research

In analyses of trends and events, future research could include:

(1) Education and race relations "beyond integration." The implications for the schools of attempted assimilation and relations between the races generally are great; ER&D should seek to develop alternative approaches to forced integration.

(2) Transition from a production to a service oriented society. The importance and kinds of jobs for which the schools are "preparing" students impacts greatly on the types of education offered; ER&D should monitor the status of different jobs future job market profiles and needed skills, and the role expected of the schools.

(3) Student unrest and confrontation politics. This is a trend that has many implications for education, especially higher education. ER&D should examine the causes of this trend and formulate constructive educational responses.

(4) "Radical" educational discoveries. NIE should examine the educational implications, and the implications for ER&D, of such psycho-technologies as operant conditioning, drug enhancement of learning, hypnosis, and sensitivity training; the inheritability of intelligence; and expectancy and suggestion effects on learning potential.

Developed Sources of Expertise

The research centers noted in program element 1 and the Institute for the Future all have an immediate capability to perform trend and event analysis toward targeted applications, although the methods that each would employ tend to differ.

Anticipatory Needs Assessment

This program element might consist of two separate but interdependent facets: (1) an identification of personal and societal needs in terms of educational outcomes and needed knowledge; and (2) an identification of needs of the education system (including R&D) in terms of its context within the larger society. Both facets are dealt with in a context of the present by one or more program options suggested by the various NIE planning documents; emphasis is here placed on anticipatory needs assessment which can be adequately carried out only if the preceding two program elements have produced useful results.

It is not clear with what frequency such a function should be performed --whether continuous (at a low level along with other related tasks) or more intensive and being repeated after some interval of time (possibly four years). Such a choice should be contingent on the overall structure of these program elements, which is discussed later.

Techniques

Formal techniques that have been developed for anticipatory needs assessment include "relevance trees" (described in Jantsch), decision theoretic approaches, convergence methods (Carese), and psychometric procedures for scaling individual preferences. Given the complexity of educational concerns and the lack of agreed upon terminology, however, the formal approaches tend to be unsuitable for most practical applications.

Examples of Results

The document "A Needs Assessment for Educational R&D" that was prepared by the present authors for the NIE Planning Unit is an example of the type of preliminary results that can be provided from a future-oriented perspective.

Topics for Future Research

Anticipatory needs assessment in the future could investigate:

(1) Lack of diversity. The needs of the society for the multiple modes of thought and action, both for societal and subcultural survival, suggest that an investigation of needed diversity in education is an important task of ER&D.

(2) Outmoded curricula. The rapid increase and obsolescence of knowledge and information in our society means that curricula often may become outmoded or even misleading; ER&D has a responsibility to assess what curricula are presently and will become outmoded, and to work to develop replacements.

(3) Separation of student and society. The relationship of students to society and their reciprocal needs should be assessed and translated into educational practice.

(4) Higher level skills. Higher level skills are those which enable citizens to establish a sense of community in spite of a high rate of mobility; to integrate diverse information inputs in meaningful ways and to perceive complex situations in holistic terms in spite of information overload; to communicate effectively with persons outside one's own specialty or with those who hold differing basic values or ideologies; and to establish quickly a sense of trust or effective relationships with others in temporary work groups. ER&D should discover effective ways in which these skills can be learned, and establish appropriate ways for public education to teach them.

Developed Sources of Expertise

The Center for Policy Research (New York City) and the Center for Educational Policy Research at Harvard each have capabilities to provide anticipatory needs assessments for education with a nearer-term time perspective, and the two Educational Policy Research Centers currently funded by USOE to provide a longer-term perspective.

Policy Implications

The emphasis of this program element is the assessment of the plausible societal consequences of following present or proposed policies--either research strategies (as in the development of educational applications of various "psycho-technologies" such as operant conditioning, sensitivity training, or psychoactive drugs) or operational applications (as in compensatory approaches to education of the disadvantaged). Topics would be selected on the basis of NIE interest and also the needs identified by the preceding program elements. Although perhaps not obvious, the results of program element 1 (the holistic past/present/future perspective of society) are indispensable to adequate understanding of the societal

implications of present and proposed policies.

As no single study, with the biases unique to its maker, can fully encompass the assessment of policies addressed to broad education-related problems, the support of both holistically slanted and conventionally oriented analyses would be worthwhile.

Techniques

Analysis of policy implications, more than most analysis tasks, needs to reflect a broad, multidisciplinary competence. Specific, formal techniques tend to get in the way of critical intellectual inquiry.

Topics for Future Research

Appropriate topics for future study of policy implications are:

(1) Models of the policy process. The examination and development of models of the policy process should enable ER&D to function more effectively and with more awareness.

(2) Analysis of indirect consequences. An important function of policy analysis in NIE should be the analysis of the indirect consequences of NIE programs. Such analysis should be done both of programs currently in operation and of programs being planned.

(3) Analysis of implications of educational reform movements. What unfulfilled needs do they reflect? What are the likely consequences for the educational system if they succeed or fail? Should they be fostered by public educational policy? These and other questions should be addressed by NIE.

(4) Consequences of centralized and decentralized strategies generally. ER&D should investigate the societal implications of both types of strategies.

Developed Sources of Expertise

The capacity for assessing direct policy implications exists throughout the educational system; however, the anticipation of secondary consequences in terms of broad societal impact is not a highly developed art although future-oriented policy research centers are increasing their expertise in this area.

Integration/Translation

Most of the NIE planning documents have recognized the need for secondary processing of research results so as to make dissemination more effective. The NICHD/OCD sponsored study "Research Directions for the '70's in Child Development" made the following suggestions:

> "There is a growing need for special mechanisms to aid in communications between the researcher and his publics. In order to communicate better, R&D should develop two new types of job categories within its ranks:
>
> 1. synthesizers, individuals who can correlate findings in an organized and systematic way so that knowledge can exist in a more usable and accessible form;
> 2. information specialists, individuals who can translate the language of the researcher into the language of the policy maker and the consumer.
>
> "Because the investigator's talents do not often coincide with the journalist's, information specialists are needed in the research field. [They] would be advocate[s] of the researcher and an integral part of the research system." (pp. 25-26)

The results of the four program elements described above are of relevance not only to planning personnel within NIE but also to such leaders as the NIE Director and the Commissioner of Education, as well as to the public at large. An intramural integration/translation function would maximize the liklihood that research results would reach the various relevant audiences in ways that would be understood and useful.

Dissemination

No comment seems necessary concerning this program element other than to note that the results of research described above should appropriately be handled by the targeted dissemination programs under consideration by NIE.

Support of Unsolicited Proposals

No comment seems needed here other than to stress that, as concern increases for socially relevant inquiry, high quality and innovative proposals for education-related research reflecting societal issues should be forthcoming, hence support should be provided.

Alternative Management Options

Assuming that most of the above program elements will be sponsored by NIE at some level of support, there are a number of key choices to be made in determining a management strategy for Societal Context Research.

Key Choices

Although societal context research must serve Federal educational concerns and programs, the first key choice concerns the degree to which it will be designed to explore and serve the larger educational community and society as well. Whether made explicitly or implicitly, this choice will be apparent in terms of:

(1) Location within NIE of the sponsorship and management of the research:

(a) Locating this responsibility within the Staff Offices leads to serving Federal concerns and programs primarily;

(b) Locating it in the Operational Program Offices leads more to serving the entire educational community and society.

(2) Research initiative, solicited or unsolicited:

(a) Research that is solicited, especially through the Staff Offices, tends to support primarily centralized concerns and immediate policy decisions;

(b) Unsolicited research allows a broader conception of "needed" knowledge.

A second major choice is whether educational research is to foster decentralized, pluralistically value-laden choice as the basis on which educational purposes, goals, and practices are determined; or whether it fosters more centralized, "rationalistic" planning of educational purposes, goals, and practices. This choice will be reflected in terms of:

(3) Conception of Societal Context Research:

(a) Conceived as productive of fundamental knowledge needing widespread dissemination, this type of research supports pluralistic choice;

(b) Conceived as applied knowledge, it might be constrained to produce only those types of results that fulfill the needs of more rationalistic planning.

(4) Type of research topic:

(a) The selection of political and value-laden issues supports pluralistic choice;

(b) The selection of manipulable variables, sophisticated social accounting, and management strategies supports rationalistic planning.

(5) Location of needs assessment and policy consequence analysis:

(a) Located largely within Operational Offices, these types of research tend to support pluralistic choice;

(b) Located solely within the Staff Offices, they tend to support rationalistic planning.

(6) Diversity of views supported:

(a) Support of research representing minority or divergent views supports pluralistic choice;

(b) Support of research that represents primarily consensus views supports more rationalistic planning.

The third major choice concerns the selection of a funding strategy that determines how research tasks are shared within and between research groups and individuals. Four major options appropriate to the former categories of research can be incorporated into a number of alternative strategies.

(7) Types of funding strategy:

(a) Separate elements--broadly contracted. This option would support projects separately under each of the various program elements of Societal Context Research, contracting them out to a range of different research groups and individuals;

(b) Separate elements--institutional support. Under this option projects would be funded separately under each of the program elements, but contracted out to a limited set of research centers so that each center would have a mix of separate elements covering the first four or five elements;

(c) Consolidated elements--institutional support. This type of support option would support major long-term projects, each of which would include all of the major elements. Such consolidation would contribute to the state-of-the-art of societal context research more than other options.

(d) Unsolicited research. Funding of unsolicited research could support a variety of projects ranging from single elements to several or all of them in a single project, contracted out to a wide variety of research centers or individuals.

Four Alternatives

Four structural management configurations are presented below as strategic options that reflect plausible combinations of the above seven choices, as well as different levels of overall funding for this general area.*

Alternative A (choices 1b, 2a, 3a, 4a, 5a, 6a, 7a,b,c, and d)

This alternative assumes that contextual research should be directed toward the concerns of the entire educational community; and that it should support decentralized, pluralistic choice as the basis on which educational goals, policy, and practices are developed. Although it is addressed largely to the creation of fundamental knowledge, it is of such a high NIE priority that it is made a directed program; other offices within NIE would, however, carry out intramural research and would fund limited projects in this area in order to make effective use of the results. Much of the research would be solicited, but funded in order to include a wide variety of perspectives.

The following management structure is assumed for this alternative:

Office of Directed Programs

Program--Societal Context Research	Thousands	Percent
• Holistic Analysis of Society	$500	12.5%
• Trend and Event Analysis	600	15
• Anticipatory Needs Assessment	100	2.5
• Policy Implications	1,000	25
• Targeted Dissemination	300	7.5
• Unsolicited Research	1,000	25
Staff Support Offices		
Responsibility--Integration/Translation	500	12.5
Estimated initial annual funding:**	4,000	100%

*The NIE management structure set forth in the NIE Planning Unit's March 1, 1972 "Report on Organization and Management: An Interim Organization" is assumed in these configurations.

** Estimated funding levels of each alternative represent first year funding, and might well be doubled within several years if overall support of NIE permitted.

Alternative B (choices 1b, 2b, 3a and b, 4a and b, 5b, 6b, 7a,b, and d)

This alternative assumes that societal context research should serve to inform the entire educational community and the general public. It is conceived as being productive of both fundamental and applied knowledge, such that the ability to perform rationalistic planning throughout the educational community is fostered. The core of support for the fundamental knowledge portions is located within the Office of Resource Development, with applied concerns made the responsibility of Staff Support Offices. This alternative would require somewhat lower levels of funding than "A" above, and is assumed to have the following management structure:

Office of Resource Development

Program--Fundamental Research

Component--Societal Context Research	Thousands	Percent
• Holistic analysis of society	$100	3.3%
• Trend and Event Analysis	700	23.3
• Unsolicited Research	500	16.7
• Targeted Dissemination	300	10
Staff Support Offices		
Responsibilities		
• Anticipatory Needs Assessment	200	6.7
• Policy Implications	700	23.3
• Integration/Translation	500	16.7
Estimated initial annual funding	$3,000	100%

Alternative C (choices 1a, 2a, 3b, 4b, 5b, 6b, 7a and b or c)

This alternative assumes that societal context research is supported by NIE primarily to serve Federal educational R&D program planning and evaluation needs. Consequently it is managed through the Staff Support Offices, which have responsibilities for all program elements except Translation/Integration and Dissemination (which would either be dropped or supported at a low level by external contract). However this research effort would enjoy a relatively high funding priority (relative to alternative D which it otherwise resembles more than A or B), and would conduct much of its research through RFPs. This alternative would have the following structure:

	Thousands	Percent
Staff Support Office (Office of the Director)		
Responsibility--Long range planning		
Program--Societal Context Research		
• Holistic Analysis of Society	$50	3.3%
• Trend and Event Analysis	150	10
• Anticipatory Needs Assessment	150	10
• Policy Implications	450	30
• Integration/Translation	100	6.7
• Targeted Dissemination	100	6.7
Office of Resource Development		
Program--Fundamental Knowledge		
Component--Societal Context Research		
• Unsolicited Research	500	33.3
Estimated initial annual funding	$1,500	100%

Alternative D (choices 1a, 2a, 3b, 4b, 5b, 6b, 7a or c and d)

This alternative also assumes that societal context research is supported by NIE primarily to serve Federal educational program planning and evaluation needs, but gives this research a lower priority than Alternative C, and splits up the program elements into responsibilities that are assigned to the various Staff Support Offices within NIE. Most research is conducted by in-house research staff or through RFP's to established policy centers. Funding is assumed inadequate for developing the state-of-the-art or for increasing the research capability in the educational community at large.

The following management structure is assumed for this alternative:

Staff Support Offices Responsibilities -	Thousands	Percent
• Holistic Analysis of Society	$50	3.3%
• Trend and Event Analysis	150	10
• Anticipatory Needs Assessment	150	10
• Policy Implications	450	30
• Integration/Translation	100	6.7
• Targeted Dissemination	100	6.7
Office of Resource Development Program--Fundamental Knowledge		
• Societal Context of Education (both solicited and unsolicited research)	500	33.3
Estimated initial annual funding:	$1,500	100%

III INCREASING THE EFFECTIVENESS OF THE EDUCATIONAL R&D SYSTEM

A variety of difficulties have been identified that in the past have prevented Federally sponsored R&D in education from contributing effectively to the solution of problems.

- ER&D has not enjoyed an adequate level of support (0.4 percent of total expenditures for education, in contrast, for example, to 10 percent in the defense industry and 5 percent in industry at large).
- Most ER&D has been conducted in a "scientific" mode that tends to ignore the political nature of educational renewal.
- The exploration of topics in virtually all university-based ER&D has tended to follow disciplinary lines rather than being problem oriented.
- The communication of conclusions of most ER&D has been oriented more toward colleagues than toward potential users.
- The ERIC system and written reports of ER&D results are simply not read by most potential users of ER&D at the local level who rely instead on word of mouth to obtain information.
- The "rise time" of targeted R&D projects, from initiation to exportable/adoptable products, is longer (five to ten years) than the planning horizon of the ER&D policy making process.
- The planning, execution, and attempted dissemination/ utilization of Federally sponsored ER&D has been oriented around a centralized, hierarchical "push" strategy, and has tended to ignore more decentralized, participative "pull" strategies that would foster incentives to innovate at local levels (The Experimental Schools Program being a notable exception); and
- Most Federally sponsored ER&D has been oriented around a conception of research as the development of products, as opposed to a more operations research approach that focuses on the development of problem-solving processes.

The Rand/DHEW study "Organizing for Innovation: Alternative Designs for the American Educational R&D System" (WN-7793-HEW) identified a number of different mechanisms with which Federally sponsored ER&D (including NIE, USOE, and OS activities) could be conducted. These mechanisms are largely based on Havelock's four-fold typology of innovation processes

(linear marketing model, problem-solving model, social interaction model, and linkage model). They were devised with the expectation that an overall strategy would be compounded from these mechanisms -- depending on the specific type of problem, user group, available resources and so forth, involved. As the Rand/DHEW Study rightly observes:

> "All functions in the R&D product flow must be performed and coordinated effectively. Duplication (and its inevitable bureaucratic concomitants --jurisdictional jealousies, competition for funds, and lack of communication and cooperation) should be avoided.
>
> "An OE-NIE-OS dissemination system must be capable of reaching all actors in the educational system, with all inputs required to effect change at the local level.
>
> "The dissemination effort must 'follow through' at all stages of the adoption process, from awareness through trial, and evaluation to adoption."

Most of the educational R&D strategies that have been developed for NIE to date are contingent on strong and successful agency-based management at the Federal level. Given the decentralized character of American education with its strong traditions of local control, complimentary strategies at the local level are needed to balance this emphasis. Two main types of such program initiatives are developed below:

(1) A Decentralized Market Mechanism

(2) Programs to Increase Local Incentives to Innovate

A Decentralized Market Mechanism

Although the market mechanism was included in the Rand/DHEW list of alternative mechanisms for innovation, it was there conceived as a mechanism in service of the "linear" R&D model in which "products are developed by a central organization and 'sold' to consumers, who have relatively little to say and little participation in this process or in the product they receive." Emphasis would be on "centralized, Federal performance (italics added) of all the functions identified in the 'product-flow' process, and especially the 'marketing strategy' and the 'salesforce' functions."

This is essentially a Federal government version of the drug detailer approach used by the pharmaceutical industry.

A different conception of how a market mechanism could serve educational renewal is based more on the "problem-solving" and "linkage" models of innovation: that which is offered by the vendor is not so much a well-packaged product as a set of operations-oriented R&D services that will help the client solve his problems. Vendors could be either public agencies or private (profit or non-profit) organizations --although flexibility, innovativeness, and consumer needs would probably be better served if vendors were not in the public sector.

The basic premises underlying the latter conception are:

- That a centralized Federally conducted marketing system will inevitably become politically captive in ways that do not reflect the pluralistic model of political participation on which the nation is based (i.e., that the best interests of "have not" groups, who currently comprise a priority constituency in education will not be served).

- That marketing in educational renewal should not stress adoption of unilateral, rational product flows, but should stress adaptation of products and processes and the building of necessary local support systems -- which research has shown necessary for the continued viability of attempted innovations-- support that will ensure adoption of the new and its integration with the old.

- That by providing LEAs with categorically earmarked discretionary funds for the purchase of such ER&D services (from public or private vendors), and by providing Educational Extension Agents to help them become "good choosers" and "wise consumers," the accountability and consumer orientation problems will be most effectively addressed.

- That an effective way to deal with the OE/ NIE dissemination interface is to establish a development network that both NIE and USOE would use, but which would be controlled by demand characteristics, rather than by centralized planning.

- That the production of excellent research that is not utilized is often less valuable than practical improvements that move rapidly from laboratories into classrooms.

Examples of ER&D Services that might be offered through such a decentralized market mechanism include:

- Operations research and/or organizational development consultation for SEAs and LEAs to diagnose problems, to select, design and install needed innovations, and to create the necessary organizational supports that seem most feasible.

- Planning assistance to previously under-financed LEAs, who through post-Serrano "leveling up" may have doubled or trebled the financial resources to spend as previously.

- Installation of new school/classroom management systems (e.g., the team taught, open classroom, individually prescribed instruction approach; or Skinnerian positive-reinforcement token economies for discipline and incentive development; or feasible curricular systems based on highly cost-effective educational technologies using some combination of computer-assisted, pre-programmed, and video-taped instruction); with on-site retraining of personnel as required.

Functions of Federally sponsored program activity in support of such a mechanism might include:

- NIE and/or USOE funding of incentive contracts for the development of public and private marketing capabilities, and for provision of services identified as being of high national priority but which would otherwise be insufficiently attractive to warrant involvement.

- Formula-based "categorical" funding of LEAs (and SEAs) earmarked for discretionary purchases of the ER&D services they need; this might be feasible as a component of "post-Serrano" Federal aid to education.

- A clearinghouse for vendor information, featuring both substantive information and referral services; could be accomplished by means of:

  --A Central Clearinghouse in NIE, which would publish a Vendor Directory that lists the organizations and services they offer with appropriate "key word" cross indexing

  --The ERIC system

  --The Information Service Units in USOE's Educational Development Network.

- A consumer-oriented "better business bureau" activity, both to discourage hucksterism and to provide empirical information relating to formal regulation of vendor activities in education.

- Integration of the decentralized market mechanism into whatever type of dissemination/utilization/renewal network evolves, such that the Educational Extension Agents would become key "linkage" persons, helping LEAs find, use, and evaluate the services they need.

Resource and Organizational Requirements

The success of a decentralized market mechanism clearly depends on effective linkage persons, such as the Education Extension Agents, and on ER&D information and management systems that lead researchers to produce innovations which consumers want (or can be persuaded to want), can find out about, can afford, and will install. A judicious selection of the management and innovation strategies identified by the Rand/DHEW study should be adequate for this purpose. (Note, however, that the decentralized market mechanism requires fewer Federal organizational resources than do most other approaches they developed).

It is difficult to cost out a decentralized market mechanism at the present stage of analysis. Its overall cost would tend to be very high, relative to other approaches with which it is likely to be compared, as it leads to tailor-made solutions at the local level. In making a cost-benefit assessment, however, this approach should be conceived as a mixture of applied research and operational dissemination/utilization program activity. The higher cost seems reasonable given the history of costly and "successful" research that was little used for the solution of educational problems, and the likelihood that the past research/dissemination funding ratio in education (approximately $10 for R&D to every $1 for dissemination) will probably have to be reversed regardless of what mechanism for active dissemination is chosen.

Benefits/Results

- Avoids the possible irrelevance, inflexibility, and political captivity of centralized solutions developed within the Federal government, as seen from the local perspective.
- Provides active, face-to-face dissemination and relevant adaptable approaches to local educational problems, previously lacking in Federally sponsored ER&D.
- Would lead to a permanent but flexible and self-renewing system of dissemination/utilization, owing to the inherent action of the market mechanism.
- Would increase the user-orientation of Federally sponsored ER&D, not by pushing basic researchers to communicate with end users but by providing incentives for entrepreneurs to translate the results of such basic research into marketable commodities.

- Would allow the Federal agencies to be effective in an overseer role rather than in an operational role.

Weaknesses/Limitations

- Might lead to "hucksterism" and unethical behaviors on the part of profit-oriented vendors.
- Very costly.
- Depends on LEA personnel wanting to innovate, and to use outside assistance for so doing.

Experts for Consultation

The Center for the Study of Advanced Educational Administration (CASEA) at the University of Oregon, and the Center for Research on the Utilization of Scientific Knowledge (CRUSK) at the University of Michigan, are two organizations whose past work has entered the areas considered above. Persons who could be contacted are Richard Schmuck (CASEA), and Ronald Havelock (CRUSK).

Programs to Increase the Local Incentive to Innovate

A curious paradox exists with regard to Federal involvement in public education. On the one hand, it is recognized that "local control" of the schools is not only traditional and constitutional, but a wise strategy; on the other hand, the trend is toward increasing "laying on" of Federally provided resources, strategic goals, and operational tactics for educational renewal. Where these resources, goals, and tactics are not matched by local desire to adopt and adapt them, and local willingness to make the changes necessary for so doing, the ultimate results of such attempted renewal are typically minimal. Unless incentives and skills to innovate are fostered at the local level, it is unlikely that any Federal program of educational renewal, regardless of its other characteristics, will be successful.

It is often assumed that there is a great dissatisfaction with the schools as they are and that a degree of motivation exists for educational renewal at the local level. In a national survey of parent attitudes about the public schools, however, Gallup found that some 74 percent felt

that the schools should not innovate more and that the primary sources of unhappiness with current school operations are (1) the cost of the schools as reflected in local property taxes and (2) the lack of discipline that is perceived to exist. The "silent majority" is not strongly supportive of "educational renewal."

A further difficulty not usually recognized is that the persons now attracted to elementary school teaching possibly tend to be of a personality type that has a strong need for highly structured and authoritarian situations and for an unambiguous environment; they tend to react to stress in non-rational and emotional ways (O.J. Harvey's "Type I Concrete Orientation")*. Either the more flexible ("abstract oriented") persons are not attracted to elementary teaching or they drop out as a result of not being able to fit the current state of the system. Public elementary schools do not tend to attract the kinds of persons who are constitutionally most able to engage in innovative educational renewal.

An additional problem facing educational renewal at the local level is simply that many bright and able teachers seek to avoid the schools where the problems are greatest and/or where the living conditions are least congenial. Teaching in "difficult" elementary schools does not enjoy high social status.

The following program initiatives are responsive to these considerations:

(1) Change-Agent Training

(2) Social Marketing Approaches

(3) Voluntary Sector Approaches

Change-Agent Training

A variety of researchers and authors have recognized the importance of "change agent" skills inside organizations that need to innovate. Particularly in tradition-oriented communities, administrators and teachers often fail to recognize the significance of recent cultural changes that make their traditional methods of questionable appropriateness or relevance to student needs. Research on innovation in schools has concluded that the school principal is of key importance vis-à-vis innovation. Like chief executives in other organizations, his personal support of the

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* O. J. Harvey, "Belief Systems and Education: Some Implications for Change", (an unpublished paper available from the author at the University of Colorado) cites a variety of published studies leading to this conclusion.

innovation and his personal skills in guiding people through the anxiety-provoking ambiguities of change are almost essential prerequisites to the establishment of stable innovation. He must also have the skills necessary to justify the innovation to an often suspicious school board and community. A second key role in school innovation is that of the "lead teacher" who not only leads in the acceptance of the idea and trial of the innovation, but also provides the face-to-face peer support that other teachers need and depend on.

Neither of these crucial roles can be effectively played by persons outside the school system, although outsiders such as extension agents or contractors can immeasurably help with such inside functions.

Research has also shown that "just" developing skills that facilitate change is not enough. Such skills can be used effectively only if the necessary resources--both financial and substantive--are provided as a support base from which innovation can be generated. Thus, given the scarcity of funds, it would be preferable to coordinate any Federally sponsored training programs for change in the schools with other formal programs of educational renewal; i.e., training opportunities should be offered to personnel in those schools that are to receive new funds or other resources for educational renewal, or which have a definite plan of action to seek such resources.

Functions of Federal programming the area of change-agent training might include:

- Awarding incentive development contracts to outside centers that have the expertise to develop a marketing capability for both on-site and off-site change-agent training.
- Offering funds for such training as an adjunct to other programs of educational renewal at the local level.
- Awarding curricular development contracts for change-agent training in more traditional schools of education.
- Awarding R&D contracts for developing, testing, and disseminating alternative models of and sites for the teaching of change-agent skills, seeking especially models of effective self-teaching.

Resource and Organizational Requirements

Cost estimates for current off-site training programs vary between $500 and $2000 per trainee, depending on the scope of the training; typically

they include a one-week workshop plus one or two follow-up sessions.

Organizational requirements would include the usual RFP design and evaluation, and contract monitoring functions, as well as inter-program and possibly inter-agency coordination, depending on the extent to which change-agent training was included as a part of operational educational renewal programs sponsored by USOE.

Benefits/Results

- Builds local competence to develop willingness to innovate and to facilitate the solution of personal problems caused by innovation.
- Makes Federally sponsored innovation programs more feasible to install at the local level.

Weaknesses/Limitations

- Some types of change agent training lead trainees to incorporate basic values and related behaviors that are not feasible for use in traditional settings, resulting in failure and disillusionment about the possibility of effecting local reform.
- Might cause jealousy and suspicion among teachers not selected for the change-agent training.
- Unless quite costly, most training programs cannot provide enough follow-up to be adequate--although the "consortium of cooperating schools" approach to educational renewal appears to be an effective way of dealing with this difficulty.

Experts for Consultation

The Research Advisory Committee on Innovative Programs for Education (RACIPE), which is chaired by Ronald Havelock, would make an ideal panel of experts to assist in program development and evaluation.

Social Marketing Approaches

Centralized planning and programming has been criticized as being essentially antithetical to the basic ideals of a democratic society. In education the principle of local control has been upheld although, as noted above, most trends are toward increasing Federal control in at least a de facto sense. If local communities do not recognize the need for educational renewal, perhaps the best approach is not to mandate reform, but instead use the techniques of social marketing to raise the level of awareness of the importance of education to life opportunities in a changing society, of the importance of the school teacher in the problem school, of new

educational practices found effective and ready for local adoption; and of the "desirability" of having the local schools "keep up." Several purposes might be served by this approach:

- The importance of good elementary education would become more generally recognized
- Tradition-oriented communities would become more willing to innovate, and
- A more competent and innovative type of person might be attracted to the career of elementary school teaching.

The use of advertising and marketing techniques has become an accepted Federal activity where the national interest is concerned (for example, television and magazine advertising have been extensively used by the Commission on Drug Abuse for raising the level of awareness about a national problem, and by the military and the Peace Corps for image creation and recruitment). It is not clear, however, that such precedents should be interpreted as opening the door to NIE for similar efforts. The issue of the Federal government using the media to propagandize and change attitudes in support of its agenda is a serious one: the most careful analysis is needed to determine any unintended second-order consequences. For example, would such social marketing by the Federal government tend to lead to an unacceptably high degree of replacement of the pluralistic political process by an image-creation process based on what Daniel Boorstin calls "pseudo-events?"

Various spokesmen have called for the recognition of applied educational R&D as essentially a political activity. The notion of Federally sponsored social marketing (that is, of the government actively advocating specific educational reforms) brings this issue of ER&D as a political activity into a clearer perspective than do some of the less forceful dissemination techniques. The underlying issue remains, however, and needs to be addressed: to what degree and in what areas should NIE take an activist/advocacy role as opposed to the more traditional "neutral" stance?

Functions of NIE programming in the area of social marketing might include:

- Award a competitive contract for developing alternative public-sector social marketing approaches to, e.g., make teaching in "problem" schools an attractive career option for bright, mission-oriented youth, or to increase public awareness of the need for educational renewal in the elementary school (Cost, $50,000 to $100,000).

- Award a competitive contract to develop alternative social marketing approaches to the professional sector, e.g., publicizing and creating a demand for Federally sponsored educational renewal services. (Cost, $50,000 to $100,000.)

- Support a targeted multi-disciplinary/multi-role study team to assess the implications of various types of Federal involvement with social marketing in education. (Cost, $80,000 to $100,000)

- Conduct a high level NIE/USOE/OS/OMB policy conference on Federally sponsored social marketing activity in education, leading to a go/no-go policy regarding NIE/USOE marketing to the public as distinct from the professional sector.

Resource and Organizational Requirements

Operational costs of social marketing programs would depend on the types and levels of targets selected, hence cannot be costed out at this stage of analysis. Adequate preliminary study and planning, however, should be possible within the $150,000 to $300,000 range. Organizational requirements in the planning phase for NIE would vary depending on how much of the policy analysis is done intramurally, but the requirements would certainly include a planning team for RFP generation (15 man-days), a program monitor, and at some point, the Director, his Advisory Council, and persons responsible for policy research, and inter-agency coordination.

Benefits/Results

- Would increase the status of elementary school teaching, or of other targeted aspects of education.

- Would create a public demand for local educational renewal.

- Would disseminate the results of educational R&D more effectively.

Weaknesses/Limitations

- Might lead to propaganda and/or politically motivated image manipulation, with education used as a vehicle for other ends.

- Difficult to incorporate pluralistic management; "only one voice" may be heard.

Experts for Consultation

Philip Kotler is a systems-oriented professor of marketing at Northwestern University's Graduate School of Management. He and his colleagues are currently investigating social marketing as an approach to planned

social change (see his and Zaltman's article in the July, 1971 issue of the Journal of Marketing).

Voluntary Sector Approaches

The United States has a long tradition of policy making based on cooperation between voluntary and government organizations. This arrangement worked well at a local level where face-to-face relationships were feasible and a relatively high degree of agreement on social goals was possible. With the rise of extensive urbanization and of centralized policy making, however, the ability of all but the largest voluntary organizations to help set public policy has declined.

Various Federally sponsored "war on poverty" programs recognized this problem and attempted to stimulate community participation in governance through community action councils and the like. While much has been said about these attempts, both pro and con, it remains unclear just how successful they were and why.

If local educational renewal is to enjoy the support it needs from the community it serves, new incentives and organizational techniques are needed that will stimulate more effective and meaningful community involvement.

Functions that NIE program activity might fulfill in this area include:

- Conduct of a state-of-the-art survey of community involvement, the functioning of voluntary organizations in a policy advisory capacity at the local level, and the specific problems that prevent such voluntary participation from being more effective. (Cost, $20,000 to $50,000.)

- Organization of a conclusion-oriented conference bringing together people experienced in voluntary sector work of various types, those with expertise in the development of voluntary organizations, school people, NIE/USOE representatives. (Cost, $15,000 to $20,000.)

- Award of a competitive contract to develop practical models of participative assessment and planning that could be used at the local level in education. (Cost, $20,000 to $80,000.)

- Award of a competitive contract to develop, test, and disseminate (to specified groups) one or more "exportable" methods to foster and organize voluntary involvement in educational assessment and renewal activities at the local level, with emphasis on inner-city schools with large disadvantaged populations. (Cost, $200,000 to $500,000 over three years.)

Resource and Organizational Requirements

Adequate information on which to base feasible courses of NIE activity in the voluntary sector could be obtained with an expenditure not exceeding $60,000. Organizational requirements would be greater in this area than in most others unless the operational NIE approach would be one of simply providing resources and minimal evaluation for external development of the state-of-the-art in voluntary involvement. If NIE and USOE were to develop operational strategies that required extensive collaboration with voluntary groups (ranging from professional educational associations to local citizen groups), as in the Rand/DHEW "Local R&D Linkage" option, a far greater involvement of NIE staff would probably be required.

Benefits/Results

- Should make educational renewal a much more participative enterprise, in keeping with American traditions.
- Would develop methods by which the sense of legitimacy of education and other public institutions which has been eroding in recent years might be restored.
- Might ameliorate the feeling of powerlessness that many citizens are reputed to have with regard to governmental policy.

Weaknesses/Limitations

- Might lead to destructive politicization of the local school if extremist ideological groups attempted to dominate or disrupt.
- Might involve too many highly opinionated persons who have little awareness of the actual realities with which schools must deal, unless measures were taken to "educate" citizen participants.

Experts for Consultation

The Center for a Voluntary Society (Washington, D.C.), the Center for Research on the Utilization of Scientific Knowledge (The University of Michigan), the National Training Laboratory/ Institute of Applied Behavioral Science (Washington, D.C.), and Stanford Research Institute have personnel who have helped voluntary organizations become more effective. John Dixon at the Center for a Voluntary Society is an active link-person in this area.

IV RESEARCH ON MULTI-AGENCY COORDINATION

For any given problem, there are always a number of organizations--public and private, Federal, state, and local--that have programs addressing the problem in some way. This is especially true of the problems with which the educational system is tasked, since so many of them are systemic in nature and are concerns of many sectors of society. As the rate of change in society continues to increase, and as society continues to become more "closely coupled" (where a change in one sector impacts on other areas--often in unanticipated ways), the need becomes critical to develop effective skills and procedures to coordinate efforts (a) between Federal agencies; (b) between Federal, state, and local levels of government; and (c) between the public and private sectors.

Existing Federal or state functional bureaucracies do not respond easily to wider problems that require effective coordination of inter-agency, inter-level, and inter-sector efforts. If NIE is to be successful in its multi-faceted role "to improve educational practice through research and development," an important research goal should be to increase the state-of-the-art in multi-organizational coordination.

The following basic premises emerged from a brief literature search and background educational policy research:

- The literature relating to the state-of-the-art of multi-organizational coordination is very fragmented, has not been summarized and analyzed, and appears in large part to exist in the form of unpublished government memoranda or similar reports .

- Coordination of efforts in areas where jurisdictional responsibility is overlapping (as distinct from hierarchical), in the Federal government especially, has been sporadic and often ineffective, but is universally seen as necessary.

- Systemic "macroproblems" do not necessarily imply the need for centralized "macrosolutions," but do imply the need for coordinated solution strategies that may be incremental in nature.

- Increasing emphasis will be put on locally generated solutions, since a likely trend is toward general financial aid, although categorical aid programs will continue in education.

- The state level is a key one in the American educational system, being the link between the Federal level (which is increasingly the source of both financial resources and R&D products) and the local level (which controls and conducts the actual operations of public education); but the generally low level of competence at the state level tends to make inter-level coordination more difficult.

- Federal programs should enhance the problem-solving and coordinating capacity of state and local governments.

The NIE planning document entitled "NIE--Coordination with Other Federal Agencies" lists some 17 operational options or modules from which to select in constructing an overall strategy for inter-agency coordination. Rather than duplicate this effort, several additional options relating to ER&D are offered for consideration that reflect the need for an improved state of the art in multi-organizational coordination. They are as follows:

(1) State-of-the-Art Assessment and Analysis

(2) A Research Advisory Committee on Multi-Organizational Coordination

(3) A Research, Development, and Training Center for Multi-Organizational Concerns

State-of-the-Art Assessment and Analysis

As noted above, the literature relating to multi-organizational coordination has not been summarized and assessed. Especially lacking is an assessment of the "community action" group experience of various war on poverty projects, and various attempts at inter-agency coordination at the Federal level. If an "invisible college" exists in this area, it needs to be identified and consulted by NIE.

The most urgent need is for a thorough and competent: (1) assessment of the literature pertaining to multi-organizational coordination; (2) an identification of promising case studies that might lead to the illumination of variables crucial to the success of multi-organizational ventures; and (3) identification of professional personnel with broad knowledge and experience in multi-organizational coordination.

Functions of such an assessment project would include the following:

(1) Summarize the literature relating to multi-agency coordination

(2) Interview persons with relevant multi-agency experience

(3) Develop an appropriate taxonomy with which to categorize different aspects of this area

(4) Prepare a critically annotated bibligraphy

(5) Develop a list of propositions that come out of the literature and the interviews to help guide future research

(6) Consider what further programs in this area NIE might sponsor.

Resource and Organizational Requirements

Given the low level of the literature on multi-agency coordination, assessment would be more difficult than is often the case. Hence $80,000 to $100,000 seems a realistic range for a one-shot study. Organizational requirements would include a very careful and competent RFP writing team, and consideration of any results of the study by the Policy Unit that may result in recommendations for NIE research in this area of concern.

Benefits/Results

- Would provide a basis for planning in the direction of systemic solutions to societal problems.
- Would lead to better formulation of needed subsequent research.

Weaknesses/Limitations

- Given the undeveloped nature of the subject domain, a single study may develop an insufficient basis for further action in the area.
- If academically based, the project may lay too great a stress on the literature, which for political as well as other reasons, probably systematically excludes most of the information of greatest relevance.

Experts for Consultation

A wide variety of researchers, both academic and others, have the competence to perform this state-of-the-art assessment.

A Research Advisory Committee on Multi-Organizational Coordination (RACMOC)

Advisory committees are a standard mechanism used in policy making. A panel of experts that has proven especially useful to the USOE's National Center for Educational Communications is the Research Advisory Committee on Innovation Processes in Education (RACIPE). The panel is made up of

well-known specialists in the field of diffusion, utilization, and innovation in education. The functions of the panel are various, but its members primarily serve as advisors regarding (1) programs or policies that are being proposed by the client agency or (2) types of research or development that should, in their view, receive high priority for support. It provides an appropriate model for NIE to follow in this area of concern. Candidates for such a committee could be identified, in part, by the state-of-the-art assessment project described above.

The functions of RACMOC would include provision of:

(1) Technical oversight of NIE-sponsored research and development efforts in the area of multi-organizational coordination.

(2) Leadership in suggesting new areas relating to multi-organizational coordination.

(3) Personnel and a politically neutral context with which to conduct conferences on problems of multi-organizational coordination.

Resource and Organizational Requirements

The resource requirements would depend on the extent to which such a panel would be utilized by NIE, but might fall within the range of $50,000 to $100,000 annually, assuming sporadic consultation, at least two meetings, and one "think piece" per year. Larger conferences, requiring the preparation of perhaps five or fewer background papers, might be held as appropriate at an approximate cost of $80,000 each.

If such a committee were to be formed and used adequately, it should be consulted during the formative stages of both RFP and operational policy development relating to multi-organizational coordination. NIE would be responsible for ensuring that RACMOC was used appropriately as well as for overseeing its project management.

Benefits/Results

- Would provide an economical means of acquiring a sustained, expert strategic overview and advisory capability to NIE and other organizations in this research area.

- Would facilitate the research management task of NIE, especially the coordination task.

Weaknesses/Limitations

- The committe might recommend action only in their own disciplines or for their own organizations.

Experts for Consultation

Sources of consultative expertise should result from the state-of-the-art assessment.

A Research, Development, and Training Center for Multi-Organizational Concerns

A center focused on multi-agency concerns, modeled after the existing Educational R&D Centers, appears to be a promising option. Although the model on which these centers were developed is still undergoing evaluation, it appears to be a successful alternative to more traditional university-based research, being associated with and drawing on the resources of a major university yet retaining operational independence.

The functions of the new center would include the following:

- Develop the state-of-the-art in multi-organizational coordination. Although this work would focus on educational applications, its scope should be wider than education, as such; it would deal with the broader issues and problems in multi-organizational cooperation.

- Train personnel for multi-organizational work. This training would include administration of a program for post-baccaleaurate study fellowships and field internships.

Resource and Organizational Requirements

Presumably such a center would be managed by the Office of Directed Programs, but would interact with NIE personnel responsible for inter-agency concerns and with the Policy Office as well. Given the size of such a venture and the long term funding commitment that it entails, a very careful RFP development effort, including a preliminary planning conference, would be essential. An annual funding level of $600,000 to $2,000,000 is consistent with the funding of the present educational R&D centers.

Benefits/Results

- Would provide empirical knowledge and innovative practices relevant to multi-organizational coordination in education-related areas.

- Would directly benefit outher programs designed to increase the effectiveness of the educational R&D system .

- Would provide training opportunities not currently available for multi-organizational work.

- By capitalizing on field internship experiences, the Center would gain knowledge not likely to be obtained by conventional research approaches.

Weaknesses/Limitations

- The center initially might be insufficiently action-oriented to have an effect on NIE operation.

- No structure exists to ensure that its results would be adequately disseminated/utilized.

Experts for Consultation

RACMOC should provide experts for advice on R&D and training in multi-organizational concerns.